

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please rewrite claims 1 and 13 as follows.

Listing of Claims:

1. (currently amended) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound, comprising the steps of: mixing a metal powder with a reinforcing material to obtain a mixed powder, filling the mixed powder into a vessel, placing Al on an upper side of the mixed powder filled into the vessel, heating the Al and the mixed powder under reduced pressure to a temperature that is several tens of °C higher than the melting point of Al, and impregnating the mixed powder with an Al melt, wherein a spontaneous combustion reaction between the metal powder and the Al melt converts the Al melt into an aluminide intermetallic compound, and the Al melt and the metal powder are used respectively in such amounts that a mass ratio of a remaining Al after the spontaneous combustion reaction to the intermetallic compound-based composite material is within a range from 0:10 to 3:7, and wherein reinforcing material particles are dispersed within the intermetallic compound-based composite material.

2. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 1, wherein Ti powder comprises said metal powder, and Ti powder is mixed with Al in a relative mass ratio of 1:0.34 to 1:0.57, with the mass of Al being 1.0.

3. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 1, wherein Ni powder comprises said metal powder, and Ni powder is mixed with Al in a relative mass ratio of 1:0.47 to 1:0.72, with the mass of Al being 1.0.

4. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 1, wherein Nb powder comprises said metal powder, and Nb powder is mixed with Al in a relative mass ratio of 1:0.75 to 1:1.13, with the mass of Al being 1.0.

5. (original) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 1, wherein said metal powder is mixed with Al in such amounts that Al does not remain substantially after the spontaneous combustion reaction.

6. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 5, wherein Ti powder comprises said metal powder and is mixed with Al in a relative mass ratio of 1:0.57 to 1:6.14, with the mass of Al being 1.0.

7. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 5, wherein Ni powder comprises said metal powder and is mixed with Al in a relative mass ratio of 1:0.72 to 1:7.20, with the mass of Al being 1.0.

8. (previously presented) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 5, wherein Nb powder comprises said metal powder and is mixed with Al in a relative mass ratio of 1:1.13 to 1:12.16, with the mass of Al being 1.0.

9. (original) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 1, wherein a volumetric fraction of the reinforcing material in the intermetallic compound-based composite material is adjusted to 10 to 70% by volume.

10. (previously presented) A process for producing an intermetallic compound-based composite material according to claim 1, wherein the reinforcing material is an inorganic material having a shape selected from the group consisting of fibrous shapes, particulate shapes and whisker shapes.

11. (original) A process for producing an intermetallic compound-based composite material according to claim 11, wherein the reinforcing material is at least one member selected from the group consisting of Al_2O_3 , AlN , SiC and Si_3N_4 .

12. (original) A process for producing an intermetallic compound-based composite material according to claim 1, wherein the metal powder has an average particle diameter corresponding to 5 to 80% of an average particle diameter of the reinforcing material.

13. (currently amended) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound, comprising the steps of: mixing a metal powder and an oxide powder reducible by Al with a reinforcing material to obtain a mixed powder, filling the mixed powder into a vessel, placing Al on an upper side of the mixed powder filled into the vessel, heating the Al and the mixed powder under reduced pressure to a temperature that is several tens of °C higher than the melting point of Al, and impregnating the mixed powder with an Al melt, wherein a spontaneous combustion reaction between the metal powder and the Al melt converts the Al melt into an aluminide intermetallic compound, and the Al, the metal powder and the oxide powder are used respectively in such amounts that a mass ratio of a remaining Al after the spontaneous combustion reaction to the intermetallic compound-based composite material is within a range from 0:10 to 3:7, and wherein reinforcing material particles are dispersed within the intermetallic compound-based composite material.

14. (original) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 13, wherein said metal powder is mixed with Al in such amounts that Al does not remain substantially after the spontaneous combustion reaction.

15. (original) A process for producing an intermetallic compound-based composite material comprising a reinforcing material and an intermetallic compound according to claim 13, wherein a volumetric fraction of the reinforcing material in the intermetallic compound-based composite material is adjusted to 10 to 70% by volume.

16. (original) A process for producing an intermetallic compound-based composite material according to claim 13, wherein the reinforcing material is an inorganic material having a shape selected from the group consisting of fibrous shape, particulate shape and whisker shape.

17. (original) A process for producing an intermetallic compound-based composite material according to claim 16, wherein the reinforcing material is at least one member selected from the group consisting of Al_2O_3 , AlN , SiC and Si_3N_4 .

18. (original) A process for producing an intermetallic compound-based composite material according to claim 13, wherein the metal powder has an average particle diameter corresponding to 5 to 80% of an average particle diameter of the reinforcing material.

19. (previously presented) A process for producing an intermetallic compound-based composite material according to claim 1, wherein said temperature is at least 700°C .

20. (previously presented) A process for producing an intermetallic compound-based composite material according to claim 13, wherein said temperature is at least 700°C .